

ABSTRACT

A process for continuous production of cumene hydroperoxide comprising liquid phase oxidation of cumene in a reactor in the presence of an oxygen-containing gas under such conditions that an oxygen content of the total oxygen-containing gas volume fed into the liquid phase in the reactor is adjusted to not less than 22 mol% and not more than 50 mol%, and (1) the cumene hydroperoxide production per unit volume of the reaction fluid in the reactor is not less than 22 kg/m³/hr, (2) an oxygen content of an exhaust gas of the reactor is not less than 2 mol% and not more than 10 mol% or (3) said oxygen-containing gas is fed into the reactor using a sparger whose aperture pitch is at least twice the aperture diameter. By use of the process, CHP production per unit volume of reaction fluid in the reactor can be enhanced, thus the process is capable of miniaturizing the reactor allowing required CHP production or enhancing CHP production in an existing reactor.